INVENTORY & ANALYSIS

EFFECTIVE AGENCIES & STAKEHOLDERS

Listed below are agencies who will have some say or effect or vested interest in the development of the greenway:

Carolinas Medical Center
Central Park Districts II and III and South Park District
Charlotte City Council Members
Citizen's Advisory Councils
Citizen's Stewardship Advisory Council – Trail Use Committee
Charlotte - Mecklenburg Creek Coordination Committee
Charlotte-Mecklenburg Schools
Charlotte-Mecklenburg Utilities Department
Division of Natural Resources
Little Sugar Creek Action Committee
Little Sugar Creek Steering Committee
Mecklenburg County Board of County Commissioners
Mecklenburg County Park and Recreation Commission
Mecklenburg County Park and Recreation Department
Mecklenburg County Land Use and Environmental Service Agency (LUESA)
Mecklenburg County Real Estate Services
Mecklenburg County Storm Water Services
Partners for Parks Foundation
The Nature Museum (Discovery Place)
Central Piedmont Community College

This list truly represents all of the government agencies that will or have contributed to the planning process and future implementation of the Little Sugar Creek Greenway. The committees and councils are made up of citizens that have provided input and support through out the process. Members of these various committees and councils have played an important role in educating the public about the true nature of the greenway.

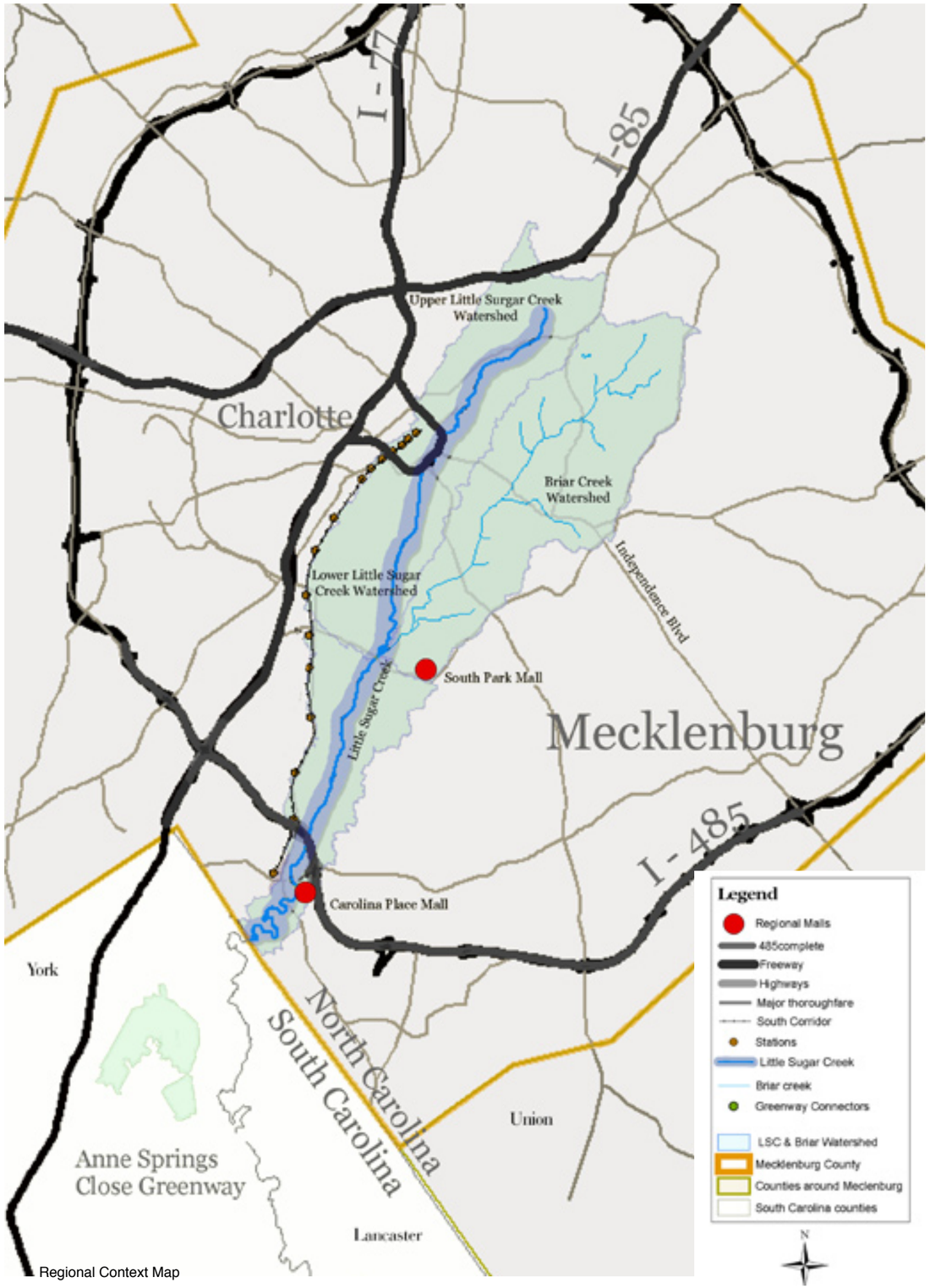
REGIONAL CONTEXT

Little Sugar Creek is located in Mecklenburg County, within the Catawba Watershed. It winds through Charlotte, North Carolina, one of the top 10 fastest growing metro areas in the nation (American Forests). With a population of nearly 1/2 million people in the city, over 700,000 in the county and over 6 1/2 million in a 100 mile radius, the Charlotte Metropolitan Area is a growing destination and exciting place to live.

Little Sugar Creek Greenway will provide much-needed linear open space and contribute to improving water quality. Little Sugar Creek has the worst water quality in the state. A paper by the American Forests reports that "between 1984 and 2001, Mecklenburg County lost over 22% of its tree cover and 22% of its open space. Over that same time period, the county's impervious surfaces increased by 127%" (American Forests).

The Little Sugar Creek Greenway Master Plan goals and objectives are harmonious with the goals of Voices and Choices of the Central Carolinas, an organization that was formed to engage citizens, government and community organizations across 14 counties of the Broad, Catawba, and Yadkin/Pee Dee river basins to create and foster a balance between the economic and environmental forces. They have developed an open space framework plan, which envisions a region where "river basins and their tributaries are clean, where the air is pollution-free, and wise use is made of the land across county and state lines... a growing, thoughtfully planned 14-county area with abundant open space and parks where you can still leave Mecklenburg County's urban bustle to wind through rolling Stanley County farmland..."

There are many opportunities for the Little Sugar Creek Greenway to connect to other greenways in the county and state, as well as in South Carolina. A future connection to McMullen and Lower McAlpine Greenway would create 19 miles of greenway trail in Mecklenburg County. As part of the Catawba Regional Trail Network, a component of the Voices and Choices Open Space Framework, Little Sugar Creek Greenway would be part of a proposed 150+ mile trail system. In Fort Mill, South Carolina the Anne Springs Close Greenway could be connected to the Little Sugar Creek Greenway via another proposed greenway, the Nation's Ford Greenway, to add extensively to the network of greenway trails.



Regional Context Map

PLANNING & STUDY AREA

Region Study Zone

Community Study Zone

Creekside Study Zone

The Little Sugar Creek Master Plan and Design Guidelines address the symbiotic relationship between three different geographical "zones": the region, the community, and the creekside.

The region includes the larger context of the watershed and Mecklenburg County as a whole. This area is a mile or further from Little Sugar Creek. The residents in the region will enjoy Little Sugar Creek Greenway as an additional recreation amenity, which they will use periodically, for example. The region's transportation system will in turn affect the greenway and its usability for residents in the region.

The community is defined as an area one mile to either side of the greenway. Residents in this context will likely use the greenway more often than those in the region. The impact that the community has on the greenway and the creek are also greater. It is in the context of the community that water quality is most important; for example, stewardship, protection, and recreation of the greenway will be more likely at the community level.

The creekside area, which includes the creek and its floodplain, is inhabited by plants, animals, and insects. An understanding of a healthy creek system is a key component of planning and design in this zone. The creekside is very sensitive to impacts from the region and the community. In most instances, the creekside will be the area in which the trail is located.

The Greenway Master Plan and Design Guidelines directly affect the creekside zone, excluding the creek itself. In the community, and to a lesser extent the region, the Greenway Master Plan outlines guidelines for development and preservation.

It should be noted that portions of the planning area lie within the 100-year floodplain. Mecklenburg County, North Carolina Wetlands Restoration Program, and the Army Corps of Engineers have several projects currently underway that would impact the creek alignment and flood elevations. It is important that anyone planning development or redevelopment in areas abutting Little Sugar Creek contact Mecklenburg County Storm Water Services to coordinate the development with the proposed plans.

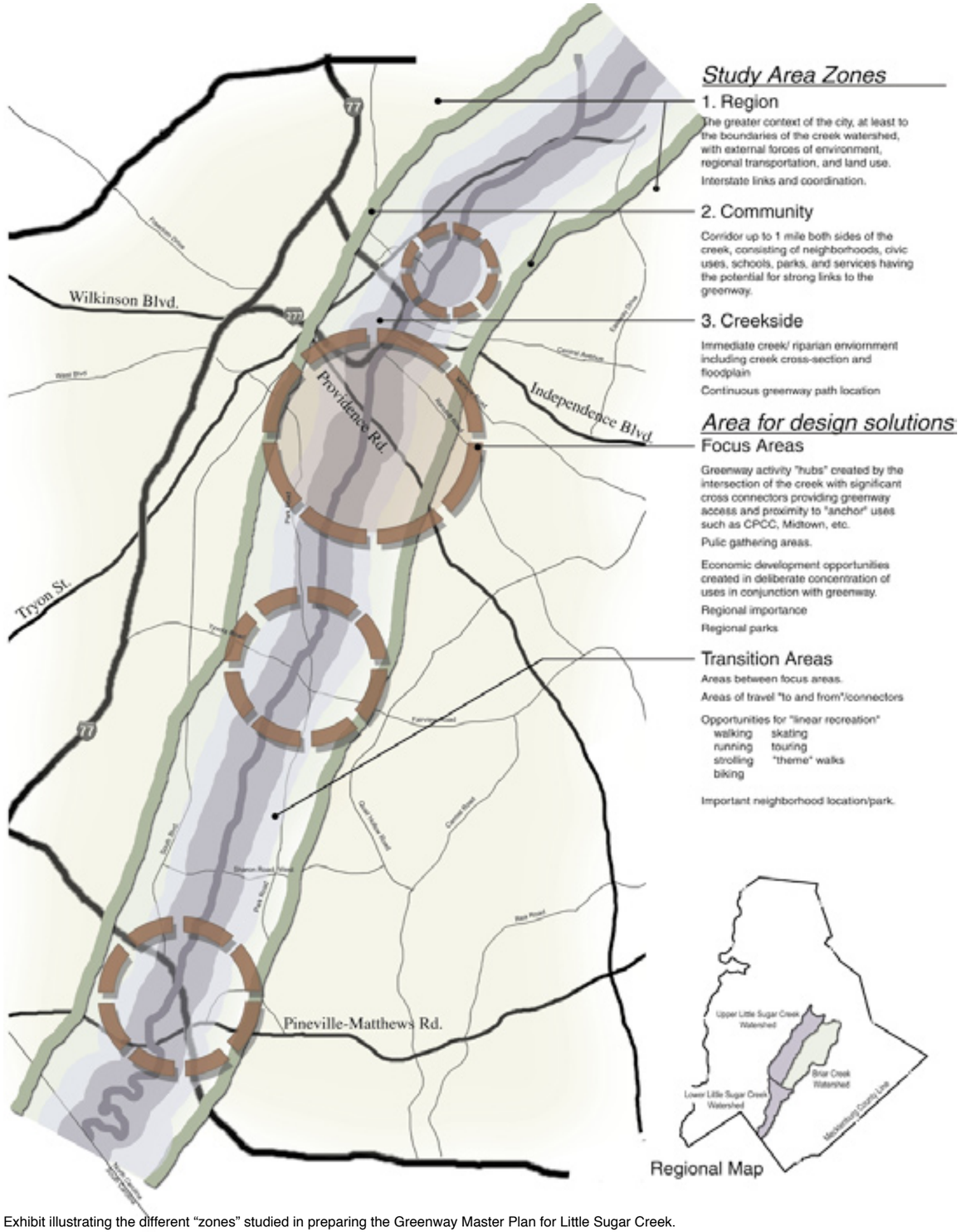


Exhibit illustrating the different "zones" studied in preparing the Greenway Master Plan for Little Sugar Creek.

"In the Catawba River Basinwide Water Quality Management Plan, the North Carolina Division of Water Quality (DWQ) demonstrated that most of the streams in the Catawba River Basin, impaired by urban stormwater, are located in the Charlotte-Mecklenburg area and that the Little Sugar Creek watershed in Mecklenburg County is one of the most severely polluted watersheds in North Carolina."

Mecklenburg County Water Quality Program

ENVIRONMENTAL ISSUES

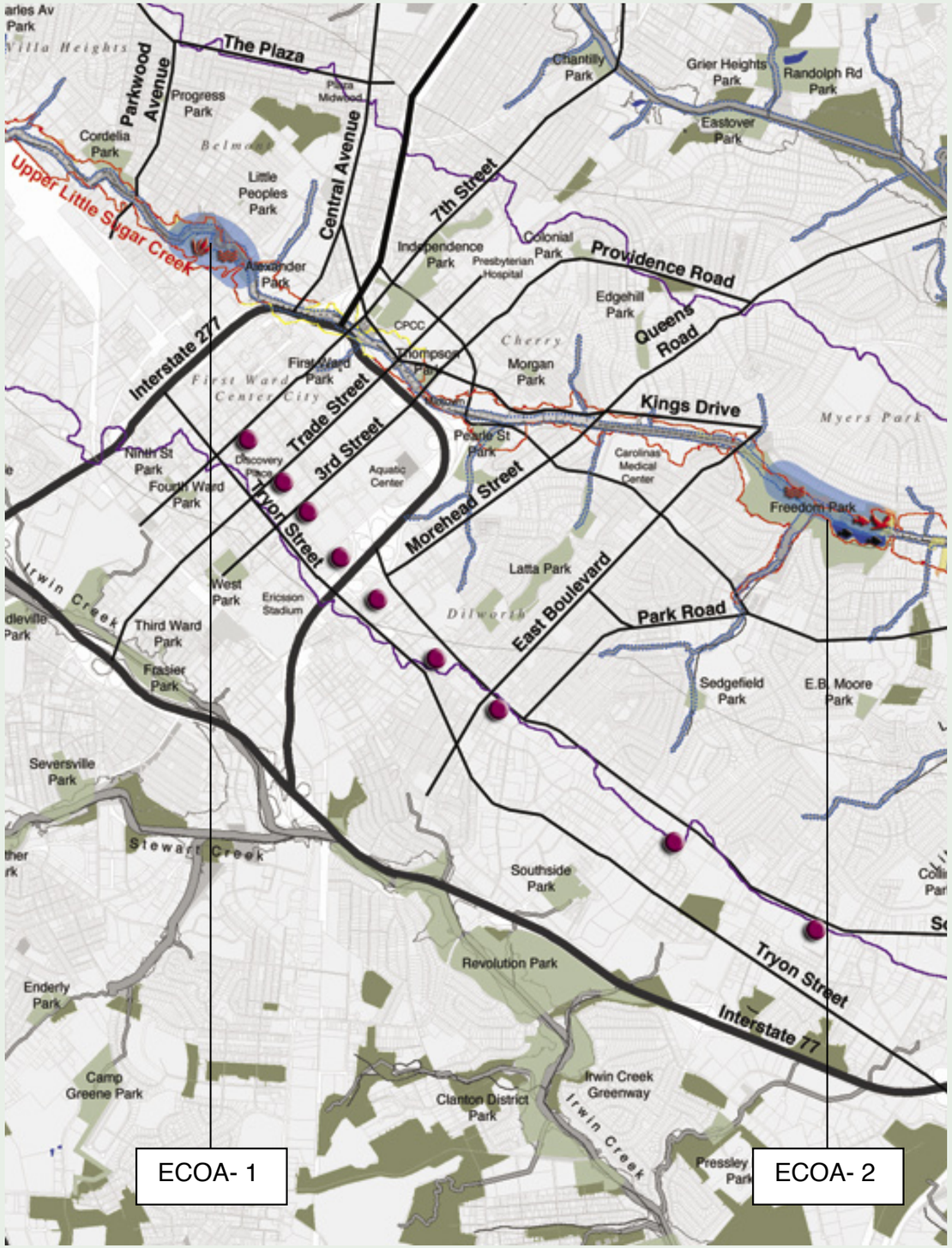
Little Sugar Creek is on North Carolina's 303(d) list of bodies of water with impaired quality. The suspected main sources that impair Little Sugar Creek's water quality are urban run-off and sewer leaks. Pollutants found in the creek include chromium, lead, zinc, gasoline, copper, oil and grease, nutrients, sediment, and bacteria (fecal coliform). During the low flow season, over one half of the base flow can be discharge from the Sugar Creek Waste Water Treatment Plant (HDR). Mecklenburg County and the City of Charlotte are dedicated to restoring water quality in Little Sugar Creek. Since 1998, bacteria levels in Little Sugar Creek have decreased by 73 percent (Rozzelle).

The drainage area for the Little Sugar Creek Basin, including the Briar Creek Watershed, is over 50 square miles. The creek drains approximately 22 square miles of Mecklenburg County above the confluence of Briar Creek, and an additional 30 square miles of surface area before it joins Sugar Creek just across the state line in South Carolina. Approximately 60 to 70 percent of Little Sugar Creek and its floodplain has been modified to increase water-carrying capacity to alleviate flooding and improve the utilization of floodplain areas. The Creek drains a watershed that is highly developed. Within the watershed, residential uses make up approximately 60 percent of the land use, with scattered open and wooded areas (23 percent), commercial uses (14 percent), and industrial and institutional tracts (2 percent) making up the remainder.

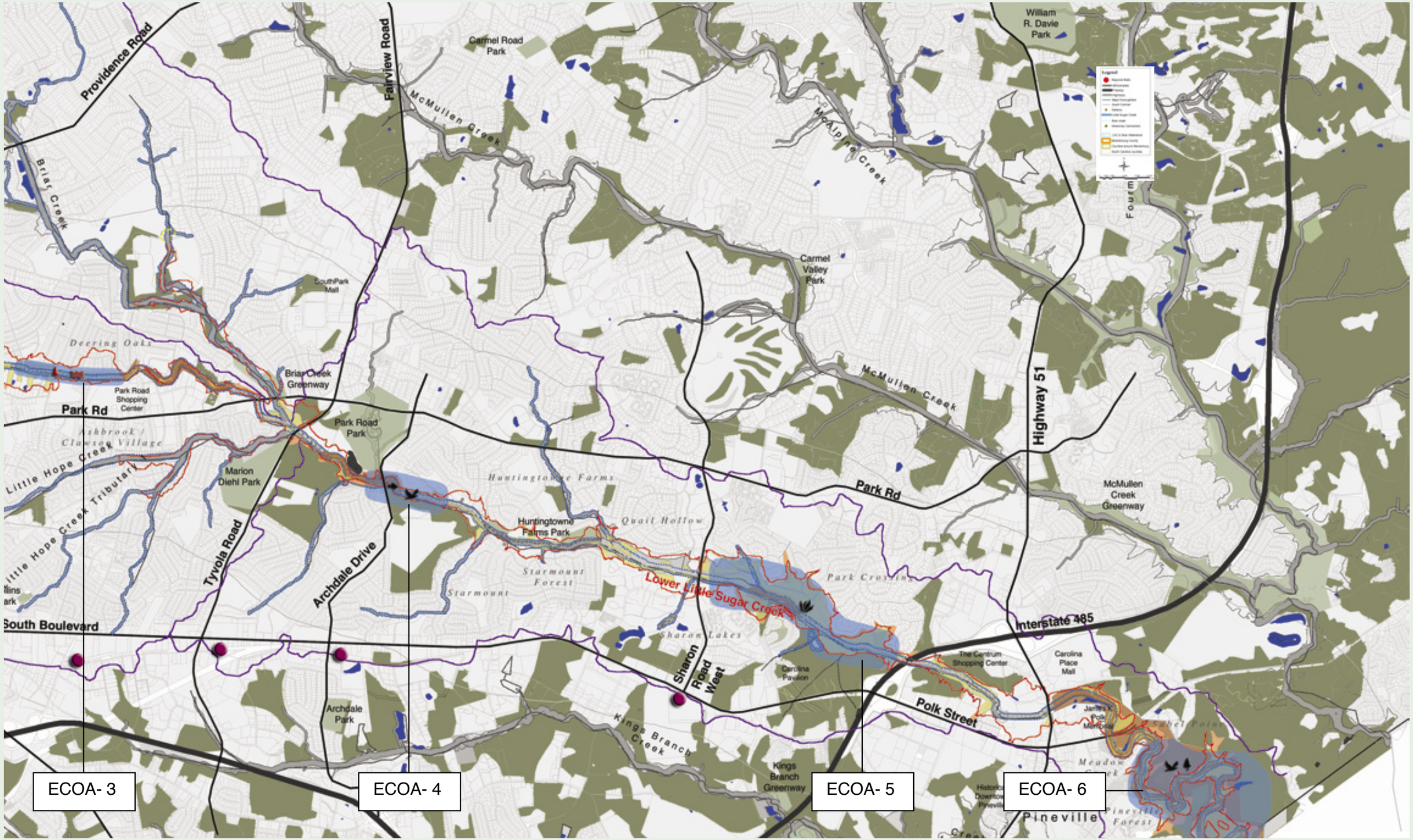
The Little Sugar Creek watershed lies within the Piedmont physiographic area of the southeastern US that receives an average of approximately 50 inches of rainfall each year, although some areas in the watershed may receive only 42 inches, while other areas receive 58 inches (1995 Mecklenburg County rainfall data). Streamflow is greatest during storms, and baseflow between storms is highest in late winter and lowest in late summer and early fall.

Little Sugar Creek has three United States Geological Survey (USGS) gaging stations that provide information on the frequency of flooding and its relation to storm intensity. The USGS gaging station at the Carolinas Medical Center near downtown Charlotte shows that the creek tops its banks approximately every two years, and may rise approximately halfway up its banks in the upper basin six or more times a year. The rise can be quite sudden and unexpected, occurring in an interval as short as one hour. Flow during flooding can reach over 8,000 cfs, but reduces to less than two cfs in late summer and early fall between storms.

Little Sugar Creek Greenway can help improve the water quality of the creek in several ways. It can be built in conjunction with stream restoration to improve aquatic habitats and bank stability. It will increase the tree canopy and vegetative cover. It also provides an opportunity to educate the public on how individuals can positively affect water quality.



This map inventories the physical and environmental conditions around Little Sugar Creek. There are six Environmental Conservation Areas (ECOA) identified in the Little Sugar Creek Greenway project area. The following two pages contain a detailed description of each of these areas.


Providence Road
Fairview Road
Carmel Road Park
McMullen Creek
McAlpine Creek
William R. Davie Park
Briar Creek
SouthPark Mall
Carmel Valley Park
Deering Oaks
Park Road Shopping Center
Park Rd
Briar Creek Greenway
Park Road Park
Ashbrook / Clawson Village
Little Hope Creek Tributary
Marion Diehl Park
Huntingtowne Farms
Huntingtowne Farms Park
Quail Hollow
Tyvola Road
Archdale Drive
Starmount Forest
Starmount
Lower Little Sugar Creek
Park Crossing
South Boulevard
Sharon Lakes
Sharon Road West
Carolina Pavilion
The Centrum Shopping Center
Carolina Place Mall
Interstate 485
Polk Street
Archdale Park
Kings Branch Creek
Kings Branch Greenway
Meadow Creek
Pineville
Pineville Forest
Highway 51
McMullen Creek Greenway
Fourth
ECOA- 3
ECOA- 4
ECOA- 5
ECOA- 6

environmental conservation areas

The unifying theme of many greenways is a landscape corridor dominated with natural features. In the case of the proposed Little Sugar Creek Greenway, this corridor buffers Little Sugar Creek, a stream that drains approximately 50 square miles of the suburban and urban lands of the greater Charlotte metropolitan area within the larger Catawba River Basin of North Carolina. Over the last 100 years, the creek has been severely impacted by point and non-point discharges and excessive storm flow from the city's streets, parking lots, and buildings. Early in the last century (1913-1920) the creek was systematically dredged to enlarge and entrench the creek for the purposes of improving drainage, land utilization, and community health (i.e. to reduce malaria outbreaks). These 'improvements' paved the way for the urbanization of bottomlands, and into the early 1960s the floodplain of Little Sugar Creek continued to be filled and encroached by residential, commercial, and industrial buildings. Today, only a few relics of its original natural diversity of physical and biological attributes have been preserved.

One element of the Little Sugar Creek Greenway Master Planning process has been an assessment of areas of significant environmental and ecological value for natural heritage preservation, water quality improvement, and environmental education. The assessment outlines six areas in which a diversity of aquatic and riparian habitat can be conserved along a stretch of Little Sugar Creek with many of its original natural attributes. These areas are labeled ECOA-1 through ECOA-6 and are identified Environmental Inventory Map on pages 14 & 15 and on the Opportunity Areas map on pages 28 & 29. Each is briefly discussed below.

ECOA-1. Belmont - Floodplain and Wetland Restoration Area (± 46 acres)

The stretch of Little Sugar Creek from Parkwood Avenue to just north of Uptown Charlotte has been identified in the Upper Little Sugar Creek FEMA mitigation study for both floodplain restoration and wetlands creation to lessen flood damages and improve stream ecology. The plan includes substantial buyout and removal of structures located within the floodplain as well as the creation of significant acreage of wetlands to treat storm waters and improve water quality. The proximity of this environmental conservation area to the center city and its location within the Belmont and Optimist Park area provide unique opportunities for the greenway.

ECOA-2. Freedom Park - Stream Restoration Area (± 43 acres)

The east side of Freedom Park (extending from East Boulevard to Princeton Avenue) has a relic floodplain with mature woods and is also the location of the Charlotte Nature Museum. This stretch of approximately 4,000 feet of Little Sugar Creek along the eastern edge of Freedom Park had a $1-2 million restoration in the winter of 2002. When this restoration was complete, the creek's eastern bank and floodplain composed approximately 30 acres of restored aquatic and riparian habitat. The Nature Museum is located centrally within the conservation area.

ECOA-3. Westfield - Floodplain and Stream Restoration Area (± 42 acres)

The Westfield stretch along Little Sugar Creek has been identified in the upper Little Sugar Creek FEMA mitigation plan for both floodplain and stream restoration. The floodplain is currently being restored by the removal of structures within it. Stream restoration is currently in the design stages, and a plan for the restoration should be

forthcoming by 2004. The work should restore many of the original natural characteristics of Little Sugar Creek, and will include approximately 20 acres of restored bottomland hardwood habitat.

ECOA-4. Tyvola-Park Road Park (± 33 acres)

In this small area, Little Sugar Creek meanders along its original path, passing the Tyvola Little Sugar Creek Waste Water Treatment Plant (WWTP) and adjacent Park Road Park. The open and wooded lands within the WWTP have been cited as prime bird watching areas, and Mecklenburg County technical staff has indicated that this area has one of the most robust aquatic habitats encountered along the 15-mile length of the proposed Little Sugar Creek Greenway.

ECOA-5. Sharon Road West to Highway 51 - Floodplain and Wetland Restoration Area (± 103 acres).

Approximately one mile long, this stretch of Little Sugar Creek between Sharon Road West and Highway 51 has a broad floodplain that has been enhanced to establish and conserve wetland habitat and hydrology. While the area is not currently dominated by mature woods, the broader extent of the floodplain and the existence of reconstructed wetlands in this area could form the foundation for a major conservation area and future resource for a regional park.

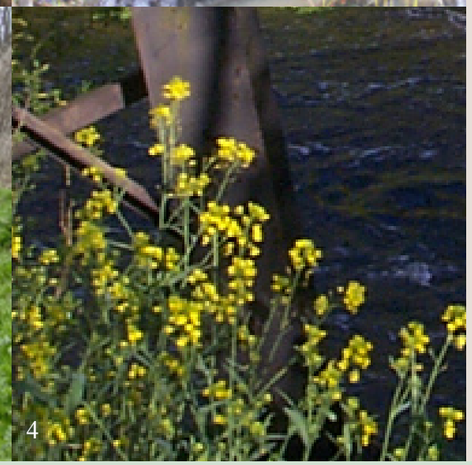
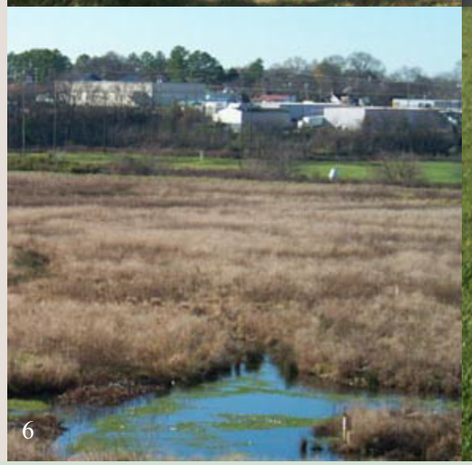
ECOA-6. Pineville to State Line Natural Heritage Conservation Area (150-300 acres)

The southernmost two miles of Little Sugar Creek in North Carolina wind through bottomland woods that have remained largely undisturbed for decades. This area represents the largest undisturbed tract of land along Little Sugar Creek from its source at Derita to its confluence with Sugar Creek in South Carolina. The stream follows an unconstrained circuitous route with steep 30- to 60-foot banks that are vegetated extensively with Mountain Laurel and Rhododendron. The diverse topography, mature and extensive woods, and natural streamscape preserved in this area beg for the creation of a regional, if not bi-state, Piedmont Natural Heritage Park at the southern end of the Little Sugar Creek Greenway.







Photos: 1. Bamboo is one of the invasive species found on Little Sugar Creek. This photo is taken south of Woodlawn Avenue. 2. Kudzu is another invasive species found along the banks of the creek. It chokes out the native species and limits biodiversity. 3. Trees in wetlands near Carolina Place Mall. 4. Watercress, a common, non-native plant found along the banks of Little Sugar Creek. 5. Example of common upland plant habitat. 6. Wetlands offer a wide range of biodiversity in plant and animal life. 7 & 10. Viewing native wildflowers will be an attraction for many. 8. Lawn areas are also found along Little Sugar Creek Greenway Trail. 9. Example of bottomland hardwood habitat.

vegetation within little sugar creek's floodplain

Active management and often the abandonment of management have influenced much of the vegetation along Little Sugar Creek, so that in the urban areas natural plant communities are not present. Active management can include lawns, various combinations of native and non-native trees and shrubs, and often invasive species, particularly on the creek bank. Abandonment of management allows succession into a dense thicket of invasive shrubs, vines, and herbaceous species, usually under a canopy of hardwood species.

The most common invaders of abandoned areas are Greenbrier (Smilax spp.), Japanese honeysuckle (Lonicera japonica), poison ivy (Toxicodendron radicans), cinnamon vine (Dioscorea batatas), Chinese privet (Ligustrum sinense), and Japanese stiltgrass (Microstegium vimineum). On former home sites and along apartment complexes, there is often a ground cover, also growing up the trees, of English ivy (Hedera helix).

Native Plant Communities

Two native plant communities occur along the creek, extending to the base of the slope and into the upland areas: Levee Forest Community and Bottomland Hardwood Forest Community. These exist in varying degrees of quality, meaning that some are highly disturbed, often with only a few of the typical species present, while other areas are less disturbed and have a greater diversity and larger specimens. A third native plant community, the Heath Bluff Community, occurs along the southern part of Little Sugar Creek in the Pineville area, where natural sinuosity (meander type) exists. Steep bluffs occur where the creek channel has eroded into the substrate, and this community exists on north-facing bluffs.

The Levee Forest Community occurs immediately at the top of the of the creek bank, on the levee produced by past flooding of the creek. This community is dominated by a mixture of bottomland trees and shrubs. (See Appendix for a list of plants in this community, ordered by importance).

This community is dependent upon nutrients from flood-deposited sediments. The construction of dams or reduction of the frequency of flooding changes the dynamics of the flooding and sediment supply, which may eventually lead to changes in the community.

The Bottomland Hardwood Forest Community occurs behind the active levee, away from the creek. It occurs on ridges and previous terraces and is dominated by various bottomland species. The dominant Sycamore and River Birch of the Levee Forest are absent in the Bottomland Forest. (See Appendix for a list of plants in this community, ordered by importance).

This community is flooded, at least occasionally. However, unlike the Levee Forest, it is seldom disturbed by flowing water, and less sediment deposition occurs than in the Levee Forest. Often, these areas have been cleared and used for agricultural purposes in the past. Following abandonment, the typical dominant species composition is replaced by loblolly pine (Pinus taeda) as a plantation, sweetgum, red maple, and sycamore.

The Heath Bluff Community occurs generally on north-facing areas of hard rock where the stream has cut into the surrounding softer substrates. There is a combination of dry conditions related to shallow, well-drained soil and cool, moist microclimates related to north slopes. The sites are somewhat intermixed.

Photos: 1. Algae in Little Sugar Creek. 2. Tadpoles found in a water quality pond just off of Little Sugar Creek. 3. Wetlands can help improve aquatic life in creeks in many ways, such as improving water quality. 4. Ripples found close to Archdale Drive.

aquatic life

Little Sugar Creek has historically been linked with fish kills and water quality violations. The biggest problems that the creek faces are storm water pollutants, runoff, and sedimentation; sewer leakages and chemical spills; and the lack of shade covering the stream. Minimal shade has resulted in the high summer water temperature which can be lethal to organisms and can clog channels with algae.

Charlotte - Mecklenburg County Storm Water Services, the County's Water Quality Program and Charlotte Mecklenburg Utility Departments have teamed to tackle the problems. Through sediment control, stream stabilization, and identification and elimination of point and non-point sources of pollutions, fecal coliform counts have been reduced and both the number of fish species and their populations have increased.

An extremely fast and deep riffle in the segment south of Archdale Drive has some of the most diverse aquatic habitats found in any Mecklenburg stream. Stream restoration that includes in-stream habitat improvements and riparian zone enhancement has been successful in Huntingtowne Farms Park.

stream restoration projects

Upper Basin

Little Sugar Creek Environmental Restoration Project
Phase 1- Wellingford Street Regional Water Quality Basin (Spring 2000)

Little Sugar Creek Environmental Restoration Project
Phase 2- Belmont Neighborhood Water Quality Basin (Summer 2001)

Little Sugar Creek Hazard Mitigation Study
Cullman Avenue Industrial Area

Little Sugar Creek Streambank Stabilization Project
North Davidson Street to Sugar Creek Road (1997-1998)

Little Sugar Creek Greenway- Phase 1
North Davidson Street / Cordelia Park to I-277 / Alexander Street Park (2000)

Middle Basin

Briar Creek Streambank Stabilization & Habitat Enhancement Project
Tyvola Road to Runnymede Lane (Fall 1999- Spring 2000)

Little Sugar Creek Environmental Restoration Project - Phase 3
Upper Westfield Road Water Quality Basin (projected completion date March 2004)

Little Sugar Creek Environmental Restoration Project - Phase 4
Lower Westfield Road Water Quality Basin (2004)

Little Sugar Creek Streambank Stabilization & Habitat Enhancement Project
Brandywine Road to Princeton Avenue / Freedom Park (Summer 2001)
United States Army Corps of Engineers, Section 1135 Funding

Little Sugar Creek Streambank Stabilization & Habitat Enhancement Project
Archdale Drive to Brandywine Road (Summer 2001)

Little Sugar Creek Riparian Restoration Project
Freedom Park
North Carolina Wetlands Restoration Program (NCWRP)

Lower Basin

Little Sugar Creek Streambank Stabilization & Soil Bioengineering Project
Huntingtowne Farms Park - 4,400 feet between Sharon Road West & Archdale Drive

Stream restoration projects, like those shown in the photos above, can facilitate community involvement, which can lead to a sense of ownership and responsibility for the well-being of the project.

LAND USE

zoning & ownership patterns

Four definable land use patterns lie adjacent to Little Sugar Creek. Stretches of development abutting the creek from Cordelia Park to 10th Street and from Morehead Street to Archdale Drive are dominated by residential uses, including single family and multifamily properties, both owned and rented. The reach from Cordelia Park to 10th Street is the only reach with a typical housing style, which is 1900s mill housing. The second character type, which is urban, can be found from 10th Street to Morehead. The land use patterns are mixed, but minimal residential properties abut the creek. Some development plans include continuing the mixed use pattern in this area with the addition of residential. The third land use pattern is suburban, with single-family residential, multifamily residential, and big box retail abutting the creek. The fourth type, rural land use, is dominated by woods, and is the land use that has allowed the creek to retain its natural character.

existing greenway conditions

Approximately three miles of existing greenway trails already exist along the creek in Upper Little Sugar Creek Trail, Freedom Park, and Huntingtowne Farms Park.

The Upper Little Sugar Creek Trail is 0.9 miles long and consists of a 10-foot wide asphalt primary trail beginning at Cordelia Park and ending near Alexander Street Park. It has 8-foot wide concrete secondary trails connecting to existing sidewalks and neighborhoods. Entrances to the trail have a yellow metal bollard in the center of the path.

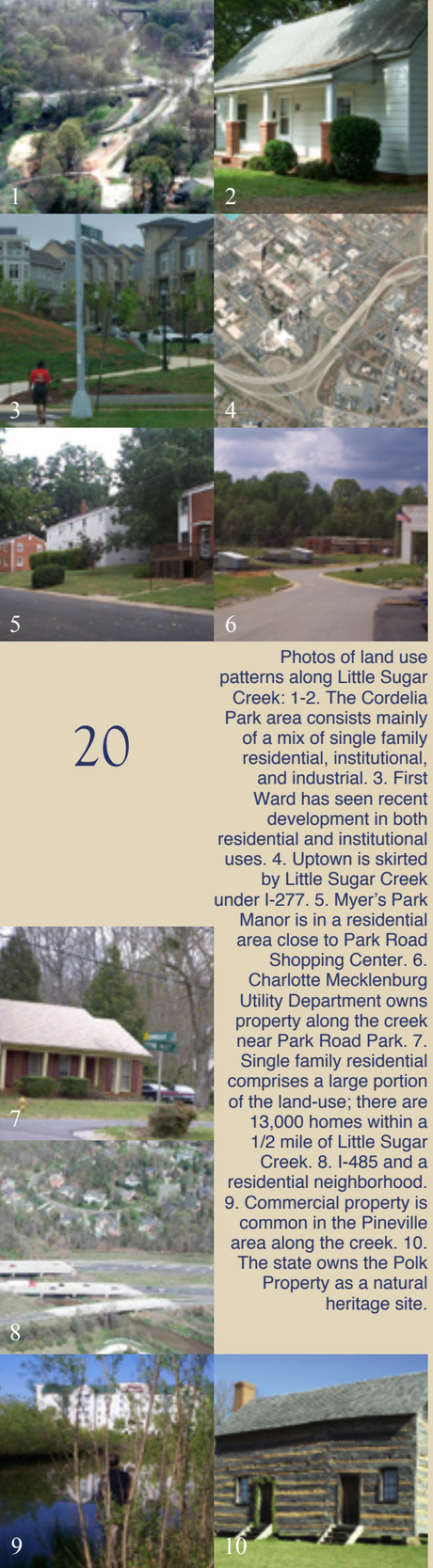
The Freedom Park/Carolinas Medical Center greenway runs from Morehead into Freedom Park. The greenway trail at Carolinas Medical Center is a 1.2-mile concrete trail located within the creek channel. Freedom Park Greenway trail is undergoing a renovation at this time, as the creek is being naturalized. Previously, the creek banks were channelized with concrete walls. This has been removed and plans call for the creek to be restored to a more natural meander. The new trail will be a 10-foot wide asphalt pedestrian/bike path.

Huntingtowne Farms Park has 0.5 miles of asphalt trail.

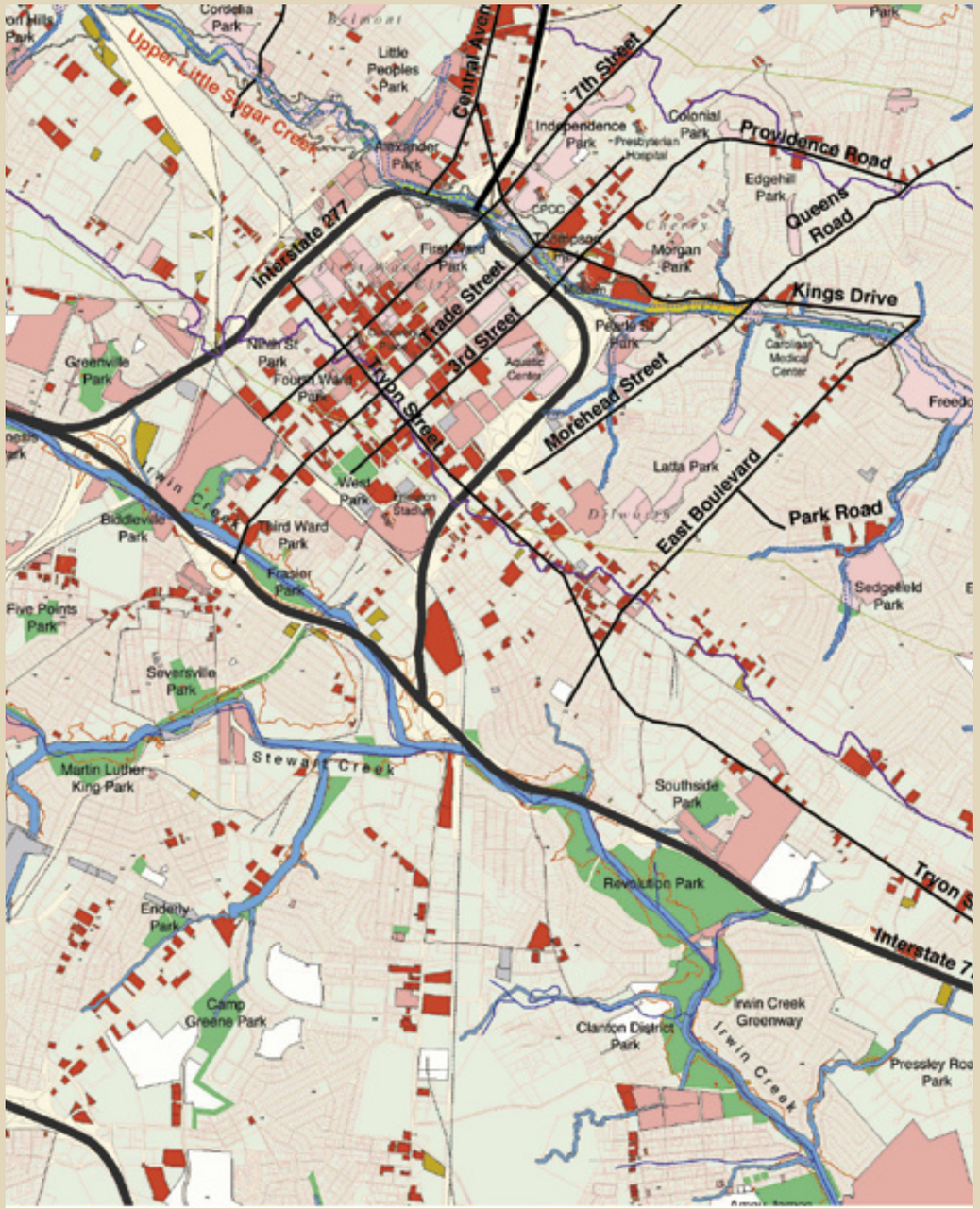
adjacent neighborhoods & activity centers

Little Sugar Creek Greenway will create connectivity that doesn't currently exist. For example within five blocks or 2,000 feet of Little Sugar Creek the following are found:

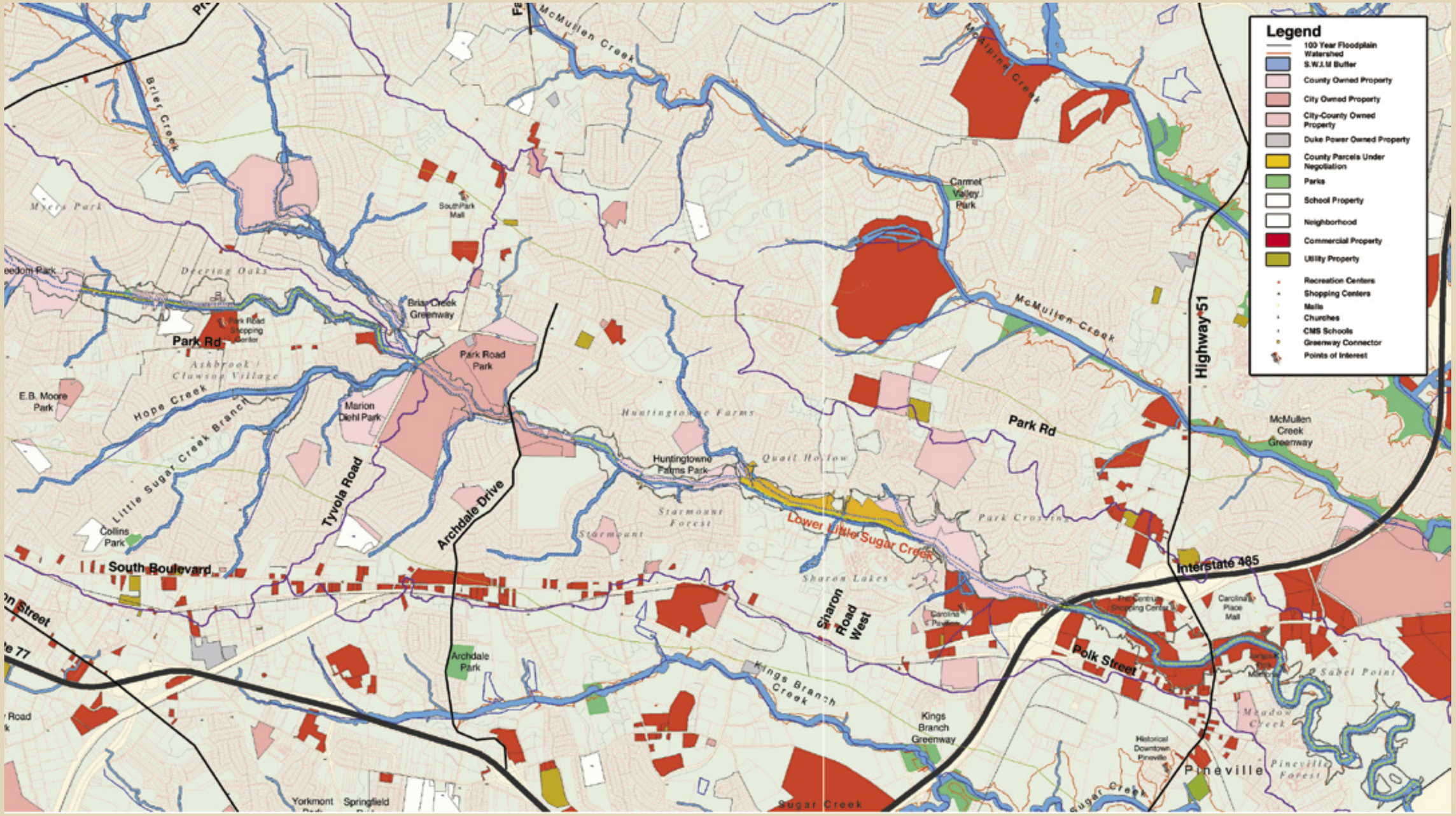
- 12 Parks
- 1 Library
- 6 Community/Recreation Centers
- 5 Government Offices
- 4 Post Offices
- 1 Police Department
- 2 Fire Departments
- 3 Hospitals
- 15 Schools
- 2 Museums
- 5 Shopping Centers
- 20+ Neighborhoods



Photos of land use patterns along Little Sugar Creek: 1-2. The Cordelia Park area consists mainly of a mix of single family residential, institutional, and industrial. 3. First Ward has seen recent development in both residential and institutional uses. 4. Uptown is skirted by Little Sugar Creek under I-277. 5. Myer's Park Manor is in a residential area close to Park Road Shopping Center. 6. Charlotte Mecklenburg Utility Department owns property along the creek near Park Road Park. 7. Single family residential comprises a large portion of the land-use; there are 13,000 homes within a 1/2 mile of Little Sugar Creek. 8. I-485 and a residential neighborhood. 9. Commercial property is common in the Pineville area along the creek. 10. The state owns the Polk Property as a natural heritage site.



Land Use Map


Legend
100 Year Floodplain
Watershed
S.W.I.M Buffer
County Owned Property
City Owned Property
City-County Owned Property
Duke Power Owned Property
County Parcels Under Negotiation
Parks
School Property
Neighborhood
Commercial Property
Utility Property
Recreation Centers
Shopping Centers
Malls
Churches
CMS Schools
Greenway Connector
Points of Interest
McMullen Creek
McAlpine Creek
Briar Creek
Myers Park
Deering Oaks
Briar Creek Greenway
Park Road Shopping Center
Park Rd
Park Road Park
South Park Mall
Carmel Valley Park
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Huntingtowne Farms
Huntingtowne Farms Park
Quail Hollow
Park Rd
Tyvola Road
Archdale Drive
Starmount
Starmount Forest
Park Crossing
Lower Little Sugar Creek
Collins Park
South Boulevard
Sharon Lakes
Interstate 485
Sharon Road West
Carolina Place Mall
Polk Street
Archdale Park
Kings Branch Creek
Kings Branch Greenway
Historical Downtown Pineville
Pineville
Pineville Forest
Meadow Creek
Sugar Creek
Yorkmont
Springfield

UTILITIES

Duke Energy

Duke Power has rights-of-way along sections of the greenway for major transmission lines.

Sanitary Sewer

Sanitary sewer lines are present along the lower section of the Little Sugar Creek project area until it nears Carolina Place Parkway, then the line crosses to the McAlpine Creek Waste Water Treatment Plant. The Sugar Creek Waste Water Treatment Plant is located in the project area just south of Little Sugar Creek's confluence with Briar Creek.

It is the policy of Park and Recreation to locate the trail within sanitary and storm sewer easements when possible.

Storm Water

Approximately 50 tributaries feed into Little Sugar Creek in the master plan project area. Storm water is piped into the creek from approximately 170 drainage ditches and storm water pipes.

The City and County departments of Storm Water Services have jurisdiction over storm water and flooding. Flooding is the most common natural disaster in Mecklenburg County. Storm Water Services aims to reduce damage caused by flooding, as well as restore the beneficial functions of the floodplain and increase water quality. To achieve these goals, they endorse flood management practices such as floodplain property acquisition, removal structures in the floodplain, and floodplain development regulations. Watershed studies document the best management practices for each watershed.

Mecklenburg County Storm Water Services is aggressively tackling the water quality problem along Little Sugar Creek through stream and wetland restoration and flood hazard mitigation projects. Several of these projects have been teamed with Park and Recreation's greenway trail development projects, which is a mutually beneficial practice that should continue even outside of the current Little Sugar Creek project boundaries.

Utilities along Little Sugar Creek Greenway. 1) Cordelia Park is one of the locations that has major Duke Power transmission lines by the creek. 2) There are several aerial utility crossings along the creek, similar to this one near Sharon Road West. 3) The proposed greenway trail should follow sanitary sewer line rights-of-way where possible.

Gas

The major road crossings (such as Belmont, Independence, Brunswick, Princeton, Park, Archdale, and Highway 521) have elevated crossings (strapped to the underside of the bridges) of 6-inch gas lines. Highway 51 has an elevated 10-inch gas line.

A 16-inch gas transmission line also runs parallel with Little Sugar Creek from Archdale to the AMC Theater at Carolina Place Mall. It runs on the west side of the creek from Archdale to the end of Watercrest Drive, where it crosses under the creek to the east side. It then continues down the east side until it crosses back to the west side behind the AMC Theater and continues to South Boulevard.

TRANSPORTATION & ACCESS

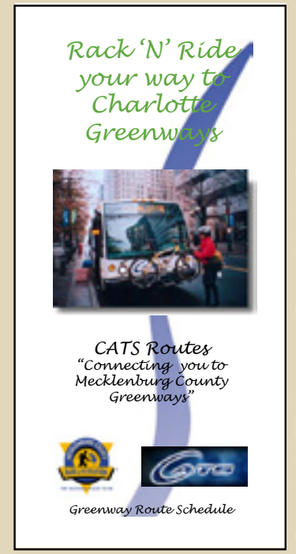
Thoroughfares

There are 28 crossings along the project area, of which three are classified as freeway-expressway, 13 are major thoroughfares, two are minor thoroughfares, and one is a railroad crossing. These are locations most likely used to access the greenway by regional users.

Charlotte Area Transit System (CATS)

Bus

Work should be undertaken with CATS to create a bus guide for greenway users. The master plan recommends partnership between Park and Recreation and CATS to allow greenway users the option of traveling the entire greenway in one direction without having to make the return trip. This partnership has been successful in Knoxville, Tennessee.



Example CATS Greenway Route Schedule Brochure.

Proposed Light Rail

The proposed light rail transit system will provide access to the greenway for regional users. Sidewalk and bicycle access from the stations should be created as noted on the greenway master plan.

Uptown connections

Connections from the greenway to Uptown are possible on the following streets: Trade Street, 7th Street, 4th Street, and 3rd Street. The streetscape of these streets should be enhanced to create a better pedestrian-oriented connection. Connections to the existing Gold Rush Circulator Service could be made by 4th and 3rd at McDowell Street. The master plan recommends an additional Gold Rush route that would directly connect uptown residents and workers along the greenway at CPCC and at Midtown.

Trolley

There are two likely places for connection to the trolley: one at 12th Street by the historic Alpha Mills (if the trolley is extended this far), and one at McDowell Street.

Charlotte-Mecklenburg Bicycle Transportation Plan (July 1999)

The bicycle plan calls for many improvements throughout Charlotte. Coordination with the Bicycle Plan and the Bicycle Coordinator is recommended as the Little Sugar Creek Greenway is finalized to ensure bicycle connectivity, accessibility, and safety.